SUBJECT INDEX

Acebutolol, 95
Acetylcholine bromide, 42
Adenosine triphosphate, 43
Adsorption for immobilisation, 142
Adsorption for LB membranes, 23
Adsorption re selectivity, 187
Aerosols, 297
Air, 297
Aliquat 336S, 166,176
Alkaloids, 45
Amantadine, 52
Amethocaine hydrochloride, 53
Amino acids, 54
Amisodamine, 45
Amitrityline, 58
Amobabital, 59
Amperometric electrodes, 204
Amperometric glucose sensor, 24
Amphotericin, 80
Amplification, 150
Anaesthetic (local) drugs, 65
Analginium, 60
Anion exclusion, 176
Antazoline, 60
Applications of ISEs, 280
Approximate analytical methods,217
Approximate modelling, 229
Arginine, 54
Ascorbic acid, 61
Aspirin, 62
Atropine, 45
Automatic methods, 278

Bacteria electrodes, 272,294
Benzalkonium chloride/bromide, 46
Benzoic acid, 62
Berberine, 46
Beverages, 295
Biochemical applications, 294
Biological fluids, 283
Biomedical applications, 283,294, 308,319
Biosensor construction, 153
Biosensors, 137,203,309
Biot number, 226
Blood, 283,319
Bonding conditions, 213,226
Bone, 280
Bovine serum albumin, 23
Brain fluids, 287
Brain glucose, 153
Bromide interference, 169
Broxyquinoline and brobezoxaldine, 64
Bupivacaine, 65
N-Butylscopolammonium bromide, 48

Carbetapentane, 66
Caffeine, 46
Calcium electrode, 170,175
Carrier complex electrodes, 269
Central differences method, 218
Cethexonium bromide, 110
Cetrimomium bromide, 110
Cetylpyridinium chloride(bromide), 110
Chemoreceptors, 315
Chendeoxycholic acid, 70
Choral hydrate, 67
Chloride ISEs, 179
Chloroquine, 68
Chlorpheniramine, 68
Chlorpromazine, 105
Chlozoxazone, 69
Cholic acid, 70
Chromatographic applications, 300
Cimetidine, 71
Cinchonine, 46

Cloperastine, 72
Clothiapine, 91
Coated PVC electrodes, 50
Cocaine, 46
Cofactors and enzyme electrodes, 225
Complexation and selectivity, 188
Compounds for LB membranes, 7
Computer-controlled analysis, 278
Conditioning of ISEs. 177
Construction of ISEs, 177
Continuous analysis, 278
Coordination complexes, 280
Covalent attachment for immobilisation, 143
Crosslinking immobilisation, 146
Crown ether LB substances, 12
Crystal membrane ISEs, 163
Cyclodextrins for membranes, 8
Cyproheptadine, 73
Cysteine, 54

DACCP, 73
Danckwerts' method, 219
Denamethonium bromide, 63
Dental materials, 280
Dibazol, 74
Dibenzo-14-crown-4, 180
Dibucaine hydrochloride, 65
Differential measurements, 152
Diffusion, 209
Digoxin, 75
Diltiazem, 99
Diphenhydramine, 75
Dicrete charge effects, 192
Dissociations, 280
Distribution of ions, 165
Divalent ion electrode, 173
Donnan failure, 39,191
L-DOPA, 55
Doxycycline, 80
Drug-release monitoring, 35,125
Drug sensors, 35
Dynamic behaviour of electrodes, 204

E.coli, 81,100
Effluents, 299
Electrodes, general, 262
Electron mediators, 147
Electroplating solutions, 298
Enamel, 280
Entrapment immobilisation, 145
Environmental, 299,323
Enzyme competitive electrode, 234
Enzyme cycling, 150
Enzyme sequence electrode, 231
Enzyme sensors, 16,137,203,272, 294,307
Ephedrine, 76
Ethacrinic acid, 78
Ethylmorphine, 47
Extracellular fluids, 287

Fatty acid esters for reactive LB membranes, 20
Feeds, 295
Fermentations, 294
Ferrocene mediator, 24,148
Ferulic acid, 78
FET devices, 11,16,273,302
Fick's laws, 210
Filicilin, 79
Finite differences methods, 217
Flow methods, 278
Fluoride ISE, 125
Flux matters re enzyme electrodes, 223 227
Fluxes of ions, 186
Foods, 295,322
Fouling of electrodes, 151
Free energy matters, 165
Free energy of partition, 38
Fromherz-type trough, 21
Fruits, 295

Gas sensors, 25,169,303,307
Gastric fluids, 289
Gentamicin, 79
Glass electrodes, 163
Glucose sensors, 19,25,83,311
Glutamic acid, 55
Glutaraldehyde linking, 19,23
Glycine, 55
Glycopyrolate, 86
Green's function, 232
Guanidine, 87

Hair, 280
Heterogeneous enzyme electrodes, 249
Hexamethonium chloride, 63
Hexylcaine, 66
Histamine, 55
Homatropine, 47
Hydralazine, 88

Imipramine, 88
Immobilised enzyme, 137,141,154, 310
Immunochemical sensors, 314
Industrial applications, 298

Inorganic analysis, 301
Integral transform technique, 216
Interfaces, 208,277
Intracellular fluids, 287
In vivo measurements, 152,291,321
Iodide ISE, 178
Iodine sensor, 26
Ion channel mimic sensors, 16
Ion-exchange and selectivity, 191
Ionophore systems, 269
Ion pair formation constants, 42
Ion sensors on LB membranes, 10
Ion transfer, 166
ISFETs, 11,18,302
Isoleucine, 55
Isoniazid, 89

Juices, fruit and vegetable, 295
Juices, gastric, 289

Kanamycin, 81
Ketamine, 89
Kinetics of enzyme reactions, 207, 214
Kinetics of reactions, 280

Langmuir-Blodgett membranes, 3, 143,323
Laplace transform technique, 217, 230
Leucine, 55
Levamisole, 90
Lidocaine, 91
Lidoflazine, 99
Linear modelling, 212
Lipophilic compounds for membranes, 9
Liquid junctions, 328
Liquid membrane electrodes, 164, 173,178,265
Lithium electrode, 180
Loxapine, 91
Lysine, 55

Mathematical modelling, 203
Mechanisms of electrodes, 275
Mediators, 147
Medicinal applications, 294
Membrane composition effects, 173
Membrane-forming compounds, 7
Membrane inhomogeneity, 190
Membranes, nonideal, 189
Membrane surface, 192
Meperidine, 92
Mepivacaine, 55
Metallurgical analysis, 301
Methionine, 56
Methotrexate, 93
Methyldopa, 56
Metoclopramide, 94
Metoprolol drugs, 94
Michaelis-Menten scheme, 214
Microelectronics, 140
Mimic sensors, 16
Mixed potential effects, 191
Mixed solvent media, 300
Models of enzyme electrodes, 203
Models of ISE behaviour, 183
Modes of recycling electrodes, 237
Modified electrodes, 137,324
Monolayers, 6
Moroxidine, 96
Morphine, 47
Multienzyme electrodes, 231
Multilayer models for enzyme electrodes, 244
Muscle, 284

Nafronyl, 97
Naphazoline, 97
Needle electrodes, 154
Neurosensors, 315
Neutral carrier systems, 168,174, 269
Nicardipine, 98
Nicotinamide, 100
Nicotine, 47
Nikolskii equation, 162,171
Nikolskii, B.P., obituary, 331
Nitrendipine, 99
Nitrogen dioxide, 26
Non-aqueous media, 300
Notation for modelling, 211
Novocaine, 101
Nystatin, 81

Obituary, B.P.Nikolskii, 331
Olfactory cell model, 28
Optic fluids, 282
Optrodes, 14,26
Ores, 297
Organic analysis, 300
Organic metal electrodes, 149
Oxidoreductase enzymes, 148
Oxygen analysers, 305,307
Oxytetracycline, 80

Papaverine, 47
Penicillin FET, 16
Penicillins, 102
Pharmaceutical analysis, 35,294,308

pH electrodes, 12,302
Phenobarbital, 104
Phenothazines, 104
Phenylalanine, 56
Phenytoin, 107
pH ISFETs, 12,302
Phthalocyanine, 25
Piezoelectric systems, 326
Pilocarpine, 48
Platinised platinum, 154
Polythyleneimine-modified LB membrane, 20
Polymer films, 152
Polymer matrix electrodes, 265
Porphyrin, 26
Potassium ISE, 124,181
Potentiometric enzyme electrodes, 205
Product mode case solution, 220
Promethazine, 106
Propanolol, 95
Protein LB membranes, 23
Public health, 299
PVC electrodes, 265
Pyridoxine hydrochloride, 119

Quaternary compounds, 63,110
Quinine, 48

Ranitidine, 71
Reaction rate of enzyme reactions, 214,228
Recycling reactions in electrodes, 236
Redox processes and selectivity, 188
Reference electrodes, 328
Removal of interferences, 151
Response times, 222,275
Rhodamine B in optrode, 14
Riboflavin, 119
Rocks, 297

Saccharin, 111
Salicylic acid, 112
Saliva, 286
SAW devices, 26,328
Selectivity, 41,161
Sensing processes, 209
Sensitivity, 41
Sensor, layout of, 4
Separation of variables, 215
Silicon nitride gate, 11
Silver halide electrodes, 164,169
Sodium ISE, 125
Soils, 297
Solid state electrode, 263
Solid state membranes, 173
Solvation energy, 126
Spinal fluid, 287
Squarylium dye for gas sensing, 28
Stack gases, 297
Standard additions, 279
Stearic acid monolayer, 6
Stirred solutions, 228
Streptomycin, 81
Strychnine, 48
Succinylcholine bromide, 63
Sugar sensors, general, 311
Sulphonamides, 113
Surfactant systems, 298
Sweat, 286

Teorell-Meyer-Sievers theory, 164
Tetrachlorophenylborate anion excluder, 176
Tetracycline, 80
Tetraphenylborate anion excluder, 167
Tetraphenylporphyrin, 26
Thermodynamic quantities, 280
Thiamine hydrochloride, 119
Thiopental, 116
Threonine, 56
Timolol, 95
Tissue analysis, 280,289
Tissue electrodes, 272
Titrations, 271
Transport processes, 208,290
Trifluoroperazine, 106
Trough design for LB membranes, 9
Tryptophan, 56
Tyrosine, 56

Urine, 286
Ursodexycholic acid, 71

Validity of selectivity, 171
Valinomycin, 14,168,181
Vanillin, 118
Vascodilators, 98
Vegetables and vegetation, 295
Verapamil, 99
Vitamins, B_1, B_2, B_6, 119
Vitreous carbon, 153

Water, drinking, natural and sea, 297

Zero-order reaction rate, 228

AUTHOR INDEX

Anzai, J-L, 3

Beliustin, A.A., 331

Coşofreţ, V.V., 35

Hulanicki, A., 161

Lewemstam, A., 161

Moody, G.J., 261

Osa, T., 3

Schulmeister, T., 203
Stoecker, P.W., 137

Thomas, J.D.R., 1, 261

Vlasov, Yu.G., 331

Yacynych, A.M., 137

Zhang, Z.R., 35